of continental botanists would be desirable. We say this without the least wish to detract from the value of Mr. Gibson's papers, but merely to avoid the introduction of additional synonyms into our already encumbered science, of which an instance occurred in a late number of the 'Phytologist,' where a *supposed* new species of *Monotropa* is named and described which had long since received several denominations in botanical works.]—Analytical Notice of a Treatise on the Growth of Plants in closely glazed cases; by N. B. Ward, F.L.S.—Notice of a History of British Forest Trees; by P. J. Selby, F.L.S.—Varieties.

Novitiarum Floræ Suecicæ Mantissa altera, additis plantis in Norvegiâ recentius detectis. Scripsit Elias Fries. 8vo, pp. 64. Upsal, 1839.

Through the kindness of our valued friend Mr. W. A. Leighton, we are enabled to notice this interesting Appendix to the 'Novitiæ Floræ Suecicæ;' and valuable as are all the works of Fries, this is more particularly so to the British botanist, from its containing very detailed observations on several genera that have of late attracted much attention in this country. We refer more particularly to *Glyceria, Epilobium, Polygonum, Hieracium, Orchis* and *Carex.*

It is quite impossible to give extracts from such a work as the present, every word of which is highly interesting to the European descriptive botanist, but we must take this opportunity of calling attention to the peculiar difficulty that exists in obtaining Swedish publications. We have now for more than two years been endeavouring strenuously to obtain this book, but have totally failed; indeed, we believe that the copy which has been so kindly lent to us is the only one existing in Britain.

PROCEEDINGS OF LEARNED SOCIETIES.

ENTOMOLOGICAL SOCIETY.

November 1, 1841.—W. W. Saunders, Esq., F.L.S., President, in the Chair.

The Rev. F. W. Hope exhibited a fossil inclosed in a nodule of ironstone from the coal-district near Wellington in Shropshire, collected by Dr. Stevenson, having all the appearance of the caterpillar of a large *Bombyx*, with two series of dorsal tubercles, and with a series of long, cylindrical, furcate appendages on each side of the body. Fossil plants were not uncommon in this locality, but this was the only instance of an insect having been discovered. Dr. Stevenson had also found some specimens having the appearance of the wings of insects, but these having been examined by several botanists of eminence, were pronounced to be leaves of fossil plants allied to *Cyclopteris.*

Mr. Westwood exhibited portions of a very extensive collection of insects formed by E. P. Coffin, Esq., during his residence in Mexico,

which was especially rich in *Hymenoptera*, particularly in the family of bees, some of which were very singular.

Mr. Evans exhibited a drawing of a caterpillar of *Zeuzera Æsculi*, and part of a young tree which it had destroyed.

Mr. E. Doubleday brought for distribution amongst the members a large number of North American *Coleoptera*. He also exhibited portions of his collection of American *Lepidoptera*, consisting of an entire series of the genus *Polyommatus* (5 species), a new species of *Colias*, two species of *Terias* hitherto confounded together, and a singular specimen of *Saturnia Promethea*, having the antennæ and body of the male, and wings of the form and colour of those of the female.

Dr. Becker of Wiesbaden exhibited portions of his collection of German *Lepidoptera*, each species being preserved in a small case with the top and bottom of glass,—a mode much adopted in Germany.

The following memoirs were read:—

Observations on the *Coleoptera* of Port Essington, in Australia. with descriptions of the following new species. By the Rev. F. W. Hope, F.R.S., &c.

LAMELLICORNES.

Bolboceras Kirbii, Bainbridge ♂. *Castaneus, capite anticè clypeo emarginato, posticè cornu erecto apice acuto; thorace anticè et posticè excavato, cornu utrinque erecto valido, suprà denticulato, elytris concoloribus; corpore infrà castaneo, thorace pedibusque flavo-hirsutis.* Long. lin. 10, lat. lin. 6½.

Bolboceras neglectus, Hope ♀. *Affinis* Bol. Latreillii, *at minor. Castaneus, capitis clypeo emarginato, medio lineâ irregulari elevato, posticè cornuto, cornu autem apice fisso bidentato; thorace anticè abruptè truncato, posticè convexo varioloso punctis sparsim instructo; elytris striato-punctatis, corpore subtùs flavis capillis instructo.* Long. lin. 8½, lat. lin. 5.

Bolboceras rotundatus, Hope ♀. *Castaneus, clypeo integro, capite anticè excavato, medio lineâ irregulari elevatâ conspicuo, posticèque bidentato seu tuberculis binis instructo; thorace convexo glabro punctis aliquot in medio vix conspicuis; elytris striato-punctatis rotundatis piceo-castaneis, pedibus pallidioribus et pilosis.* Long. lin. 3¼, lat. lin. 2.

Bolboceras rubescens, Hope. *Rubro-piceus nitidus, clypeo integro, capite lineâ irregulari instructo; thorace convexo glabro, fossulâ rotundatâ utrinque fortiter impressâ; elytris castaneis, pedibus concoloribus.* Long. lin. 2½, lat. lin. 1¼.

Onthophagus 4-dentatus, Hope ♂. *Affinis* Onth. Capellæ, Kirb., *at major. Niger, capite ferè trigono, clypeo emarginato, thorace anticè excavato, punctato quadridentato, dentibus mediis majoribus prominentibus, lateralibus minoribus seu tuberculatis; elytris striatis, spatio inter strias subtilissimè punctulato, pedibus antennisque flavo-ciliatis.* Long. lin. 6½, lat. lin. 4.

♀. *Fœmina differt thorace integro haud dentato, angulis anticis thoracis prominentibus et acutis.*

Onthophagus Erichsoni. *Niger, capite ferè trigono, tuberculo utrinque ante oculos posito; thorace anticè valdè excavato, posticè convexo cornu medio lato antrorsum extenso; elytris striato-punctatis, pedibus, funiculoque antennarum piceis, capitulo flavescente; pedum anteriorum tibiis 3-dentatis, tarsis aurantiis capillis obsitis.* Long. lin. $4\frac{1}{4}$, lat. lin. $2\frac{1}{4}$.

This insect will at some future time be considered as the type of a distinct genus.

Onthophagus picipennis, Hope. *Piceus, thorace trigono, capite ante oculos furcato, thorace antrorsum lineâ elevatâ conspicuo, punctulato; elytris nigris nitidis, corpore infrà concolori, pedibus rubro-piceis.* Long. lin. $4\frac{1}{4}$, lat. lin. 2.

This species I have formerly received from Melville Island, and it is evidently the same as that taken at Port Essington.

Onthophagus glabratus, Hope. *Niger, capite integro, parùm excavato et subrugoso; thorace lævi sub lente subtilissimè punctato, elytris striato-punctatis, corpore infrà nigro, antennis tibiis tarsisque piceis et rufo-ciliatis.* Long. lin. 5, lat. lin. $2\frac{1}{2}$.

This species varies greatly in magnitude and in colouring: several specimens are evidently immature.

Onthophagus discolor. *Viridi-æneus clavâ antennarum flavescenti, capite integro anticè excavato, posticè convexo, lineis binis elevatis transversis, undâ mediâ, alterâ inter oculos positâ; thorace viridi, nitido sub lente punctulato; elytris atro-viridibus, striato-punctatis, punctis fortiter impressis, corpore infrà concolori.* Long. lin. 3, lat. lin. $1\frac{1}{2}$.

The above species of *Onthophagus* are all from Port Essington; and I may here mention that there are in my collection twenty-four species from other parts of New Holland which have hitherto remained undescribed.

Tessarodon piceum, Hope. *Affine* Scarabæo Novæ Hollandiæ, Fab. *Piceum, capite bituberculato, thorace inermi punctulato elytrisque striato-punctatis et subscabrosis; corpore infrà rufo-piceo, pedibus ciliatis.* Long. lin. $2\frac{1}{4}$, lat. lin. $1\frac{1}{2}$.

This appears to be an insect closely allied to the *Novæ Hollandiæ* of Fabricius, from which it differs in several points.

Copris glabricollis, Hope. *Niger, capite ferè trigono, parùm emarginato vix subrugoso, thorace lævi nitido, posticè lineâ transversâ punctorum satis notato, elytris striato-punctatis, punctis fortiter impressis: corpore infrà nigro capitulo antennarum flavescente, funiculo autem et tibiis rufo-ciliatis.* Long. lin. 5, lat. lin. $2\frac{1}{2}$.

True *Copris* in New Holland are rare; from Melville Island I possess three species, which I have named *steriocerus, corniger* and *insularis.* The insect described above is an additional one. They are all remarkable for having the punctures apparent on each side of the elytra, and therefore are closely allied to several of the African *Copridæ*, such as *C. Orion* of De Jean, and also to *Copris Bengalensis* of Hope.

Mæchidius rufus, Hope. *Rufus, capite parùm emarginato subreflexo, thorace ferè semicirculari, lateribus extrorsùm convexis, an-*

gulis posticis vix rectangulatis; elytris capite cum thorace duplo longioribus, striato-punctatis et subgranulatis; corpore infrà rufo, pedibus concoloribus. Long. lin. $2\frac{1}{4}$, lat. lin. $1\frac{1}{4}$.

PHÆNOGNATHUS, Hope, n. g.

Pachypo *affine pedibus posticis longissimis. Caput in medio cornutum, labrum porrectum, conicum, mandibulæ exsertæ, antennæ* 9-*articulatæ. Maxillæ lobis minutissimis. Prothorax anticè subretusus. Elytra conica posticè valdè attenuata.*

Phænognatha Erichsoni, Hope. *Castanea, capite unicorni, cornu nigro, posticè flavo tomentoso; thorace punctato, margine omni ciliato; elytris ad basin castaneis, posticè nigris et striato-punctatis, punctis quasi erosis; corpore infrà piloso, pedibus concoloribus et auricomatis.* Long. lin. 3, lat. lin. $2\frac{1}{2}$.

Named in honour of Erichson, who has figured some singular genera allied to *Pachypus*, as well as to the above genus.

Sericesthis Gouldii, Hope. *Affinis* S. abdominali, Hope, *at differt Castaneo-pruinosa, capite anticè excavato, posticè convexo; thorace undique lineâ elevatâ circumdato lateribus flavo-ciliatis. Elytris posticè rotundatis ultra medium incrassatis, striato-punctatis, striis parum impressis, disco sparsim punctulato; podice trigono et declivo; corpore infrà concolori pectore pedibus flavis capillis longis obsitis, femoribus segmentisque abdominis rubropiceis nitidis.* Long. lin. 11, lat. lin. $5\frac{1}{2}$.

The above insect is one of the largest species of my acquaintance; more than forty species have fallen under my notice; about thirty-five are in my collection. They would afford ample materials for a monograph. In bloom and colouring they resemble *Serica*, and to that genus they are certainly allied. Two other species were received from Port Essington with the above.

Liparetra nigricollis, Hope. *Atra, capite anticè excavato, thorace convexo, nigro, elytris striato-punctatis piceis, pedibus concoloribus, pectore flavo-tomentoso.* Long. lin. 3, lat. lin. $1\frac{1}{2}$.

The present insect belongs to a genus of the family of the *Sericidæ*; it is rich in species, as my cabinet contains nearly twenty. There are some few other *Lamellicornes* in Mr. Gould's collection, from Port Essington, but they are in too imperfect a state to describe.

GEODEPHAGA.

Megacephala Australasiæ, Hope. *Flava, antennis palpisque luteis, capite viridi; maxillis concoloribus, apicibus nigricantibus. Thorace æneo-viridi, anticè posticèque constricto, lineâque longitudinali fortiter impresso; elytris flavo-marginatis maculâ anchorali magnâ notatâ; corpore infrà viridi ternis segmentis antepenultimis piceis, apicali autem flavo, pedibusque concoloribus.* Long. lin. $7\frac{1}{2}$, lat. lin. $2\frac{1}{2}$.

This is the first instance, I believe, of a *Megacephala* being described as inhabiting New Holland: apparently it varies considerably in magnitude.

Cicindela Ioscelis, Hope. *Atro-ænea, capite æneo fronte albido,*

antennis violaceis; thorace bronzeo ferè bilobato, posticè constricto, elytris nigricantibus, lateribus externè trilunatis, maculis albidis notatis, septem punctis viridibus in singulo elytrorum ferè ad suturam positis; corpore infrà violaceo, femoribus, tibiis tarsisque concoloribus, tibiis autem ad basin flavo-maculatis. Long. lin. 3, lat. lin. $1\frac{1}{4}$.

The above elegant insect appears to be a form differing from any yet received from New Holland.

Carenum Smaragdulum, Hope. *Viride, capite nigro, foveisque binis impresso, thorace virescenti semicirculari, margine omni elevatâ; elytris læte viridibus glabris nitidis, marginibus externis elevatis et auratis; corpore infrà piceo lateribus æneo-tinctis, pedibus concoloribus.* Long. lin. 9, lat. lin. $2\frac{1}{4}$.

This beautiful species I received lately from Western Australia, and now describe it, as it is apparently quite unknown. It is probable that *Carenum* will be found to be peculiar to New Holland. No true *Scarites* of my acquaintance is of any colour but black or brown.

Eutomus megacephalus, Hope. *Cylindricus, niger, nitidus, capite maximo pronoto viridi, elytris lævibus cupreo-viridibus, tibiis anticis dente unico apicali externo.* Long. lin. 8.

Ænigma (Newm.) cyanipenne, Hope. *Atro-piceum, capite nigro punctulato, antennis tomentosis, quatuor primis articulis atris, reliquis fuscis; thorace cordato, anticè posticèque truncato, disco punctulato; elytris cyaneis, striato-punctatis, spatiis, inter strias punctulatis; corpore infrà piceo, pedibus concoloribus.* Long. lin. 7, lat. lin. $1\frac{1}{2}$.

This species is the second that has hitherto been described. I consider it as a true *Helluo*.

Ænigma unicolor, Hope. *Fusco-piceum, antennis tomentosis, thorace cordato punctulato, elytrisque subcostatis et striato-punctatis, corporeque infrà concolori.* Long. lin. 7, lat. lin. $1\frac{1}{2}$.

As this species is also a native of New Holland, and is unknown to entomologists, it is here described, although it was not received from Port Essington.

CYPHOSOMA*, n. g.

Antennæ 11-*articulatæ, articulo* 1mo *crasso, reliquis æqualibus. Clypeus protensus subemarginatus. Caput subquadratum fossulis binis inter oculos fortiter impressis. Thorax lateribus rotundatis, angulis anticis prominentibus. Elytra gibba. Palpi maxillares, articulo* 1mo *brevi,* 2do *triplo longiori apice subincrassato,* 3^{tio} *cylindrico apice truncato.*

Cyphosoma unicolor. *Capite nigro; antennis articulis* 4, *primis piceis, reliquis subtomentosis; thorace concolori, marginibus lateralibus elevatis, lineâ mediâ longitudinali anticè interruptâ, fossulâ utrinque fortiter impressâ; scutello brevi; elytris gibbis, sulcatis; pedibus robustis, tibiisque subincurvis.* Long. lin. $8\frac{1}{2}$, lat. lin. 3.

Catascopus Australasiæ, Hope. *Viridis, antennis fuscis; thorace*

* κύφος, *gibbus*, et σῶμα, *corpus*.

hexagono lateribus marginatis concolori; elytris striato-punctatis; corpore infrà piceo, pedibus concoloribus. Long. lin. $4\frac{1}{2}$, lat. lin. $1\frac{1}{2}$.

This, I believe, is the first time that *Catascopus* has occurred in New Holland, and it is singular that the form of it approaches the species of Africa much more than those of India.

Gnathaphanus (M. L.?) Licinoides, Hope. *Niger, thorace fossulis posteà fortiter impressis, elytris sulcato-striatis, punctisque excavatis, corpore infrà atro nitido, tarsis infrà fusco-spongiosis.* Long. lin. $5\frac{3}{4}$, lat. lin. $1\frac{3}{4}$.

I have little hesitation in regarding this insect as a true *Gnathaphanus*; it has not hitherto been found but in the island of Java.

CYRTODERUS*, n. g.

Antennæ 11-*articulatæ, articulo* 1^mo *quatuor proximis æquali, cylindrico, apice incrassato, subtruncato, reliquis ferè æqualibus. Mandibulæ apice subincurvatæ. Labrum quadratum medio productum subciliatum. Mentum transversum. Palpi maxillares ultimo articulo subsecuriformi, obliquè truncato. Palpi labiales ultimo articulo ferè trigono, valdè securiformi. Thorax subquadratus angulis posticis lateribusque rotundatis. Corpus gibbosum. Pedes robusti, tibiis spinosis.*

Cyrtoderus Australasiæ. *Niger, antennarum articulis tribus primis piceis, reliquis pubescentibus; thorace lineâ mediâ longitudinali, anticè posticèque interruptâ, fossulâque utrinque retrorsum fortiter impressâ; scutello parvo vix distincto; elytris striatis interstitiis elevatis, marginatis, serie tuberculorum ad margines externos approximatâ; corpore subtùs nigro, tibiis spinosis.* Long. lin. 8, lat. lin. $2\frac{1}{2}$.

HYDRADEPHAGA.

Cybister insularis, Hope. *Niger, capite integro convexo, oculis albis, thorace sub lente subtilissime punctato, marginibus exterioribus flavescentibus; elytris nigris flavo-marginatis, disco binis lineis punctorum haud fortiter impresso; corpore infrà nigro nitido, pedibus quatuor anticis flavo-ornatis, posticis atro-piceis.* Long. lin. 8, lat. lin. $4\frac{1}{2}$.

This is the smallest species known, being scarcely larger than a *Hydaticus*.

Colymbetes monostigma, Hope. *Ater, nitidus, elytris uno aurantio stigmate ornatis, corpore infrà nigro, pedibus rufo-piceis.* Long. lin. $3\frac{1}{4}$, lat. lin. 2.

Hydroporus collaris, Hope. *Nigro-piceus punctatus; thorace medio convexo, lateribus utrinque fortiter depressis; elytris subtilissime punctulatis piceis, corpore infrà pedibusque concoloribus.* Long. lin. $1\frac{3}{4}$, lat. lin. $\frac{3}{4}$.

Dineutes (MacLeay) Gouldii, Hope. *Nigro-æneus nitidus, thoracisque elytrorumque margine flavo, elytris trispinosis, spinâ mediâ*

* Κυρτὸς and δέρη. I know not where to place this genus; it seems allied to *Zabrus*, and unites in itself the characters of other families. I have also received it from Melville Island.

majori, binisque lateralibus minoribus; toto corpore infra luteo. Long. lin. $3\frac{1}{2}$, lat. lin. $1\frac{1}{2}$.

Gyrinus Iridis, Hope. *Atro-æneus, elytris abruptè truncatis, striatis, purpurascentibus; corpore infrà æneo, pedibus piceis.* Long. lin. $3\frac{1}{2}$, lat. lin. $1\frac{1}{2}$.

Hydrobius marginicollis, Hope. *Niger, lævis margine postico thoracis rufo-piceo, corpore infrà nigro et pubescenti segmentis abdominis utrinque maculâ rufescente notatis, pedibus piceis.* Long. lin. $5\frac{1}{2}$, lat. lin. $2\frac{1}{2}$.

Hydrobius assimilis. *Affinis præcedenti, at minor, toto corpore suprà nigro; elytris sub forti lente subtilissime punctulatis; corpore infrà nigro tomentoso, palpis tarsisque rufo-piceis, femoribus tibiis nigricantibus.* Long. lin. 5, lat. lin. $2\frac{1}{4}$.

STERNOXI.

Agrypnus grandis, Hope. *Niger, capite ferè quadrato auricomato, angulis anticis rotundatis; thorace convexo disco lateribus parum depressis; elytris atris striato-punctatis, corpore infrà concolori, pedibus piceis et auro-tomentosis.* Long. lin. 15, lat. lin. 5.

The above is the only species of large dimensions; there are also seven others from Port Essington, but as they are not remarkable in any respect, and are allied to various undescribed species, I pass them by.

LONGICORNES.

Mallodon insulare, Hope. *Castaneum, capite atro, antennis piceis, mandibulis denticulatis; thorace transversè quadrato, lateribus valdè serratis, disco varioloso punctato; elytris castaneis quibusdam lineis parum elevatis distinctis, corpore infrà rufo-piceo, pedibus atrioribus.* Long. lin. 21, lat. lin. $6\frac{1}{4}$.

Plocæderus Australasiæ, Hope. *Piceus, pubescentiâ griseâ tectus; thorace constricto rugoso; elytris bispinosis griseo piceoque colore irroratis; corpore infrà griseo-tomentoso, pedibus concoloribus tarsisque infrà flavo-spongiosis.* Long. lin. $10\frac{1}{2}$, lat. lin. $2\frac{1}{2}$.

There is one remarkable character apparently peculiar to this species; the male insect has the third and fourth joints of the antennæ subglobose: I can scarcely regard the appearance as a sexual distinction.

Monohammus mixtus, Hope. *Cænosus, colore nigrescenti marmoratus; thorace spinoso punctis sparsim notatis; elytris bispinosis concoloribus; corpore infrà grisescenti, tarsis suprà et infrà auricomatis.* Long. lin. 11, lat. lin. $3\frac{1}{2}$.

Stenochorus vicinus, Hope. *Nigro-piceus, antennis pallidioribus, thorace tuberculato, spinis lateralibus vix distinctis; elytris piceis disco flavis maculis notato, guttâ flavâ ovali ante apicem positâ; corpore infrà fusco-griseo, pedibus piceis, femoribus incrassatis.* Long. lin. 9, lat. lin. 2.

Stenochorus cruciger, Hope. *Rufo-piceus, antennis pallidioribus, thorace tuberculato lateralibus spinis subacutis; elytris piceis disco in medio cruce flavâ notatis, apicibus concoloribus; corpore infrà rufo-piceo.* Long. lin. 7, lat. lin. $1\frac{1}{2}$.

Xystrocera Australasiæ, Hope; *affinis* Xys. Indicæ, Hope. *Rufescens, thorace globoso, lineâ mediâ longitudinali vix notato; elytris rufo-castaneis viridi-æneis, vittâ fortiter punctatâ, femoribus atro-piceis.* Long. lin. 11, lat. lin. $2\frac{1}{2}$.

It is with hesitation that I give this insect as distinct from one received from Singapore; in sculpture, and in several minor points, it certainly differs from *Indica*, and the genus is now recorded for the first time as occurring in New Holland: it is singular that I have also lately received from Sierra Leone another species intimately allied to both of them.

Callidium Essingtoni (*Affine* Callid. obscuro, Fab.). *Brunneum, thorace lineâ longitudinali parum elevatâ, tuberculisque binis ferè mediis insignito; elytris vittâ albidâ, tuberculis variis per discum aspersis; corpore infrà griseo, pedibus pallidis.* Long. lin. $4\frac{1}{2}$, lat. lin. $1\frac{1}{4}$.

There is a third *Callidium* closely allied to the above, from the vicinity of Swan River.

Rhytiphora (Serville) piperitia. *Squamosa, nigro flavoque colore variegata; antennis plumosis articulis apicibus rufo-piceis; thorace punctato; elytris ad apicem abruptè truncatis, ad basin tuberculis majoribus nigris, aliis per totum discum aspersis; corpore infrà concolori.* Long. lin. 8, lat. lin. $2\frac{1}{4}$.

This genus seems peculiar to New Holland; more than twenty species have fallen under my notice.

Rhytiphora tuberculata. *Grisea, antennis plumosis, thorace acutis spinis insignito, elytris bispinosis, ad humeros crebris tuberculis obsitis, disco in medio albo fuscoque colore notato; corpore infrà albido piloso.* Long. lin. $7\frac{1}{2}$, lat. lin. $2\frac{3}{4}$.

Rhytiphora detrita, Hope. *Picea, capite flavo-piloso, antennis plumosis, thorace 2-tuberculato, elytris humeris prominentibus, dente elevato in singulo ferè ad basin posito; per totum discum suprà color piceus, lanugoque flava prævalet; corpore infrà concolori flavisque capillis obsito.* Long. lin. 6, lat. lin. $1\frac{1}{4}$.

Here three new species of *Lamia* ought to be introduced; unfortunately they are so changed in appearance by grease, that it is well to pass them over.

Rhagiomorpha (Newm. ?) unicolor, Hope. *Fusco-brunnea, antennis flavescentibus; toto corpore suprà et infrà fusco-brunneo et piloso, pedibus subflavis.* Long. lin. 9, lat. lin. 2.

Rhagiomorpha plagiata, Hope. *Grisea, antennis flavis articulis ultimis crassioribus; thorace griseo-piloso; elytris concoloribus, punctulatis, maculâ magnâ flavâ inter humeros positâ, secundâ minore rotundatâ haud ad apicem positâ; corpore infrà griseis capillis obsito.* Long. lin. 7, lat. lin. $1\frac{3}{4}$.

Hathlia lacteola, Hope. *Alba, antennis rufescentibus et pilosis; thorace lineâ longitudinali piceâ notato punctato; elytris cretaceis ad basin punctatis apicibus subacutis, suturâ sensim elevatâ; corpore infrà griseo-testaceo, pedibus concoloribus.* Long. lin. 6, lat. lin. $1\frac{3}{4}$.

Hathlia 4-lineata, Hope. *Rubro-picea, antennis concoloribus; tho-*

race tribus lineis albidis notato, mediâ latiori, lateralibus minoribus; elytris 4-lineatis, lineis binis albidis externis, binisque suturalibus; corpore infrà piceo lanugine albidâ asperso, pedibus concoloribus. Long. lin. 5, lat. lin. $1\frac{1}{2}$.

Hathlia lineella, Hope. *Brunnea albidâ pubescentiâ tecta; antennis rufescentibus; thorace mediâ lineâ piceâ elevatâ, lineisque albidis utrinque notato; elytris apicibus subacuminatis, lineisque quatuor albidis, parum distinctis; corpore infrà concolori.* Long. lin. 4, lat. lin. 1.

Hathlia melanocephala, Hope. *Albida, antennis griseis, articulis nigro-maculatis; capite nigro; thorace anticè concolori, posticè albo; elytris apice acuminatis, striato-punctatis, lineis albidis insignita; corpore infrà griseo, pedibus concoloribus.* Long. lin. $3\frac{1}{2}$, lat. lin. $\frac{3}{4}$.

The last four insects belong to the genus *Hathlia* of De Jean. I am doubtful if the characters are yet published, and of course if they are not, the name in future may be changed by the describer.

Having finished the *Longicornes*, I leave the remaining species from Port Essington for a continuation of the present paper.

MICROSCOPICAL SOCIETY OF LONDON.

At a meeting of the Microscopical Society held April 27th, J. S. Bowerbank, Esq., in the Chair, a paper was read by G. Busk, Esq., entitled, "Observations on some Infusoria contained in water from Africa." The water was procured from two localities, and contained thirteen species of Infusoria, all of which, except three species, were common in ordinary water; the other three, which were of the genus *Eunotia*, were precisely similar to those discovered by Ehrenberg as fossils in the Bergmehl of Sweden; but lately he has detected them in the recent state in earth from the neighbourhood of Labrador; thus having two localities of very different conditions as to climate for the same species of Infusoria, which the author states would tend to prove that no certainty as to climate could be deduced from the occurrence of fossil Infusoria.

Another paper was also read by the same author, "On the young of a species of *Ixodes* from Brazil." These insects, a short account of which was given at the last meeting, were sent from Rio Janeiro in a letter, and were still alive, although upwards of sixty days had been spent on the passage over; they are called by the natives Carapato, and are highly injurious to cattle. The author described minutely their suctorial apparatus and their general organization, and concluded that they were gifted with extraordinary powers of vitality, and imbibe their food through two suctorial tubes contained in the mandibles.

The Secretary read a letter from Dr. Southby of Bulford House*, near Amesbury, Wilts, which had been handed to him by Mr. R. Taylor; it contained three different samples of disintegrated chalk from Salisbury Plain; portions of each had been given to some mem-

* See p. 437 of the present Number.—Ed.

bers of the Society, and they had detected in them many forms of minute animals which were new to English microscopists.

Another communication was also read by the Secretary from C. G, White, Esq. of Poplar. It will be recollected that in October 1840. Mr. White exhibited to the Society some beautiful specimens of supposed minute fungi, which he had found in tolerable abundance on gravel stones in the neighbourhood of Old Ford, Middlesex; they corresponded in some measure with the description of *Craterium pyriforme* as given by Hooker and other botanists. Mr. White, having paid considerable attention to ascertain their true nature, has at last found them not to be of a fungoid nature, but the ova of a species of *Acarus*, with a body of a red colour and six legs; specimens of the insects, both in the egg and after their escape, were exhibited to the meeting.

DUBLIN NATURAL HISTORY SOCIETY.

The usual monthly meeting of the Members was held on Wednesday the 1st instant, J. W. Warren, Esq., in the Chair.

At this meeting a paper communicated by Arthur Hill Hassall, Esq., entitled, "A Sketch of the Freshwater Confervæ," was read by the Secretary.

On the subject of the growth of the Confervæ, Mr. Hassall makes the following observations:—

"The rapidity of growth of most species of Confervæ has been a subject of surprise to many observers of nature, and the explanation which I am about to offer of the causes of this very rapid growth has not, that I am aware of, been before noticed. Most, if not all, the Confervæ appear to me to increase in two ways; first, by the continued growth of the free extremities of the different filaments: this method is obvious and need not be insisted on. Secondly, by the repeated growth and subdivision of each cell entering into the formation of the filaments. I long suspected the existence of this mode of development, but was first convinced of its reality by an examination of those species of the genus *Conjugata* of Vaucher distinguished by the presence of spiral tubes winding round the interior of the cells, and especially of the one named *Conjugata princeps*. If the filaments of this species be carefully examined and contrasted together, it will be seen that in some the length of the cells only just exceeds their diameter, and that each cell contains three spiral tubes, which together perform from seven to eight turns in each, the coils almost touching each other; that in others the length of the cells is more than three times the diameter, but that still each cell contains only the same number of spiral turns, viz. seven or eight, which now, instead of being nearly in apposition, are widely separated, thus plainly proving the elongated cells to be derived from the growth of the shortest ones; and again it will be noticed in others that the cells have returned to their original length, but that each now contains only three or four spiral turns, thus manifestly proving the division of the elongated cell, and completing the chain of evidence which establishes to demonstration the existence of the mode of growth to which I

have referred in the section of the genus alluded to. The number of spiral tubes varies in this and other species in different filaments, but not in the same, and this makes a corresponding difference in the length of the joints or cells, which are longer if there be four or five tubes instead of three. The proofs now to be adduced, that this mode of growth likewise takes place in all Confervæ which are composed of simple unbranched filaments, a large class, are little less conclusive than those just enumerated. In most of the filaments of these the cells will be observed to be of various lengths, some twice as long as others, and these again of every intermediate length. Now, by means of this law of growth, this variation in the length of the cells is at once and satisfactorily accounted for, which is not to be done in any other way. But this is not all—the progress of the formation of the septa which divide the cells may be frequently traced either in the same or different filaments, which is alone sufficient to establish the reality of the existence of this law of increase in this numerous section of the class Conferva. The only Confervæ to which I should for a moment hesitate to apply this method of development, and I believe that it is applicable to them likewise, are the branched species, to which such a means of increase is less necessary, seeing that, unlike those with simple unbranched filaments, they have innumerable terminal points of growth. Now I beg to lay particular stress on this law of development, which is evidently very important, inasmuch as it not merely goes to account for the rapid growth of many species of Confervæ—for it is simultaneously in operation in each of the many hundred cells of which each filament of most Confervæ is composed—but it likewise teaches us that much caution is requisite in determining species, as it proves that the character most relied on for this purpose is one subject to very great variation—that is, the length of the joints. There is a limit, however, to this law of development, which does not, in the section of the genus *Conjugata* to which reference has been made, allow of more than one or two divisions of each cell, unless, indeed, the spiral tubes grow likewise in an equal ratio, which may be the case, and then the division of the cells may be frequently repeated. In those Confervæ which do not contain spiral tubes, the multiplication of the cells may go on to an almost endless extent. To illustrate the importance of attention to this law of development in determining species, I may observe, that but for its timely discovery I should have described several species of *Conjugata* as distinct, which are really not so, considering the length of the cells and number of spiral tubes in the interior of each cell to be the most decided characters whereon to found specific differences. They are not so, however, one of the most certain being the diameter of the filaments. But carrying this law in view, it is not difficult to estimate the extent of the variations in length to which the cells are subject, first ascertaining what the primary length of the cell is. In the branched Confervæ there are laws of development, some of them peculiar to each species, presiding over the arrangement of the branches and cells, which have hitherto escaped the scrutiny of man."